

## **RESONANT LOSSLESS CIRCUIT FOR PROVIDING A LOW OPERATING VOLTAGE IN POWER CONVERTER**

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### **ABSTRACT**

**[0042]** A converter-controller is presented for controlling a converter. The converter has a transformer, which has a primary and a secondary coil. The converter-controller includes a power device, coupled to the primary coil of the transformer, a resonant circuit, coupled to the primary coil and the power device, a voltage regulator, coupled to the resonant circuit, and a control logic, coupled to the voltage regulator. The converter-controller does not need a snubber circuit and therefore can be operated efficiently. Further, the converter-controller does not need additional auxiliary windings around the transformer core and thus has a simpler transformer structure. The described converter-controller makes it possible to use low voltage integrated circuits in high voltage applications.